G. W. BENNUM & C. M. POWERS.

Combination-Tool.

No. 217,195. Patented July 8, 1879.

FIG. 1.

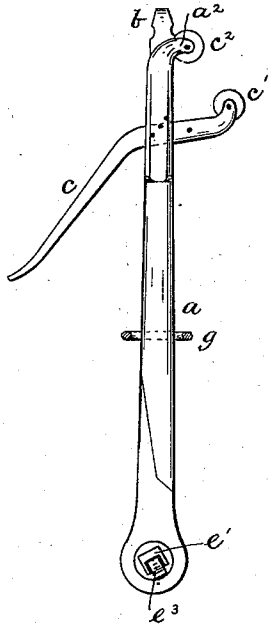


FIG. 3.

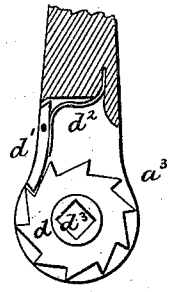


FIG. 2.

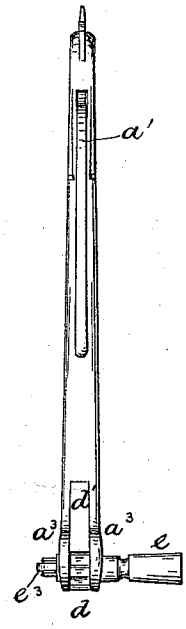


FIG. 4.

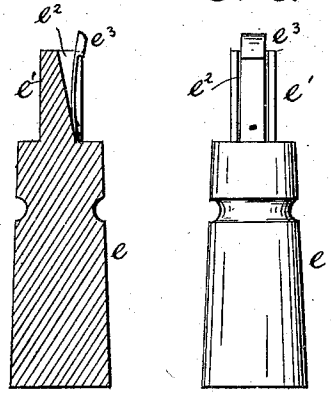
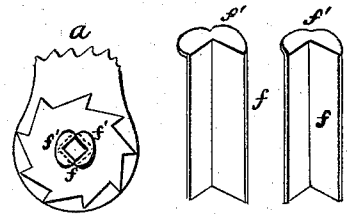


FIG. 5.



WITNESSES

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UNITED STATES PATENT OFFICE.

GEORGE W. BENNUM AND CHARLES M. POWERS, OF GEORGETOWN, DEL., ASSIGNORS OF ONE-THIRD THEIR RIGHT TO EDWIN R. PAYNTER, OF SAME PLACE.

IMPROVEMENT IN COMBINATION-TOOLS.

Specification forming part of Letters Patent No. **217,195**, dated July 8, 1879; application filed May 8, 1879.

To all whom it may concern:

Be it known that we, GEORGE W. BENNUM and CHARLES M. POWERS, of Georgetown, in the county of Sussex and State of Delaware, have invented certain new and useful Improvements in Wrenches and Attachments Therefor; and we do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention consists in a wrench, with means for adapting it to the heads of different-sized bolts, and a detachable hammer-head, all constructed as hereinafter fully described.

In the drawings, Figures 1 and 2 are side and edge elevations. Fig. 3 is a section of the end containing the wrench. Fig. 4 shows the detachable hammer-head; and Fig. 5 shows the devices for varying the size of the wrench to adapt it to different sizes of bolt-heads.

a is the main shaft, having on one end the screw-driver *b*. It has formed in it the slot a^1, within which is pivoted the lever *c*, having journaled on its end the cutter c^1, which cuts against a similar cutter, c^2, journaled in lugs a^2 on the main shaft. In jaws a^3 on the opposite end of the shaft I place a ratchet-wrench, *d*, which is held by a pawl, d^1, and spring d^2. *e* is the hammer-head, constructed with a shank, e^1, having a side slot, e^2, in which is fixed one end of a spring-snap, e^3. The shank e^1 is formed to fit snugly in the hole a^3 of the wrench, while the snap holds the hammer in place, as shown in Fig. 2. The hammer may be attached or detached at pleasure.

In Fig. 5 are shown two angle-plates, *f*, which may be placed one or both in the hole a^3 and reduce the size thereof, to adapt the wrench to three different sizes of bolt-heads. Each of the angle-plates has formed on one of its ends a flange, *f'*, which extends outward at right angles, and is adapted to rest on the side of the ratchet *d*. The flange prevents the plate from dropping or slipping through the ratchet, and at the same time serves as a ready catch by which the plate may be lifted from the socket. Each plate is formed to fit two sides of the socket, while the vertical edges of both plates are mitered or otherwise snugly jointed, so that when in together they snugly fit all sides of the said socket.

When the implement is not in use the angle-plates are fastened to the shaft by means of a sliding ring, *g*, and are thus prevented from being lost.

The operation of the several parts will be readily understood. In cutting a bolt the latter is held firmly against the shaft, the cutter c^1 is pressed in by the hand on the shaft and lever *c*, and the device is then turned as in ordinary bolt-cutters.

We do not make claim to the screw-driver and the bolt-cutters combined with the shaft *a*. These devices may or may not be attached, as described, according to the pleasure of the person making the tool.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The angle-plates *f*, constructed each to fit two sides of the socket d^3, and having their vertical edges mitered or otherwise jointed, so that when placed together they provide a socket, and having on their ends the flanges *f*, and adapted to be placed singly or together in the socket of the ratchet *d*, substantially as set forth.

2. The combination, with the ratchet *d*, having the socket d^3, and journaled in the jaws a^3 a^3 of the shaft *a*, of the hammer-head *e*, constructed with a shank, e^1, having slot e^2, and spring-catch e^3, arranged and adapted to operate substantially as set forth.

In testimony that we claim the foregoing as our own we affix our signatures in presence of two witnesses.

GEORGE W. BENNUM.
CHARLES M. POWERS.

Witnesses:
GEO. A. JONES,
PETER R. SHORT.